

1. (Amended) A method for increasing capacity of a [digital] wireless network having a plurality of cell sites, comprising the steps of:

defining a pool of available frequencies [available] for assignment; [and]

assigning [one of the] an available frequency [frequencies] from the [frequency] pool of available frequencies to each [of the] cell site[s] of the plurality of cell sites, the available frequency assigned to limit [based on frequencies assigned to neighboring cell sites to minimize a number of] neighboring cell sites assigned a same [one of the available frequencies] frequency as the available frequency;

determining signal quality parameters associated with at least one cell site of  
the plurality of cell sites; and

modifying the pool of available frequencies for assignment based on the  
determined signal quality parameters associated with the at least one cell site.

7. (Amended) A system for increasing capacity of a [digital] wireless network having a plurality of cell sites, comprising:

a frequency defining component to define a pool of available frequencies  
[available] for assignment; [and]

an assignment component to assign [one of the] an available frequency[ies]  
from the [frequency] pool of available frequencies to each [of the] cell site[s] of the plurality  
of cell sites, the available frequency [based on frequencies] assigned to limit [neighboring cell  
sites to minimize a number of] neighboring cell sites assigned a same [one of the available  
frequencies] frequency as the available frequency;

a determination component to determine signal quality parameters associated  
with at least one cell site of the plurality of cell sites; and

a frequency component to modify the pool of available frequencies for  
assignment based on the determined signal quality parameters associated with the at least one  
cell site.

13. (Amended) A computer program product for increasing capacity of a [digital] wireless network having a plurality of cell sites, comprising:

a frequency defining module to define a pool of available frequencies  
[available] for assignment; [and]

an assignment module to assign [one of the] an available frequency[ies] from the [frequency] pool of available frequencies to each [of the] cell site[s] of the plurality of cell sites, the available frequency to [minimize a number of] limit neighboring cell sites assigned a same [one of the available frequencies] frequency as the available frequency;

a determination module to determine signal quality parameters associated with at least one cell site of the plurality of cell sites; and

a frequency module to modify the pool of available frequencies for assignment based on the determined signal quality parameters associated with the at least one cell site.

19. (Amended) A method of increasing capacity of a [digital] wireless network, comprising the steps of:

- identifying cell sites of the [digital] wireless network;
- defining a pool of available frequencies [available] for assignment;
- selecting one of the cell sites;
- determining frequencies assigned to the cell sites neighboring the selected cell site to provide determined frequencies; [and]
- assigning one of the available frequencies to the selected cell site based on the determined frequencies [assigned to the neighboring cell sites to minimize] to limit a number of neighboring cell sites assigned a same one of the available frequencies;
- determining signal quality parameters associated with at least one cell site of the plurality of cell sites; and
- modifying the pool of available frequencies for assignment based on the determined signal quality parameters associated with the at least one cell site.

*Please add the following claims:*

-- 21. A method for increasing capacity of a wireless network having a plurality of cell sites, comprising the steps of:

assigning an available frequency from a pool of available frequencies to each cell site of the plurality of cell sites;

increasing the pool of available frequencies for assignment to reduce an amount of interference at at least one cell site of the plurality of cell sites; and

assigning the increased pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies.

22. A system for increasing capacity of a wireless network having a plurality of cell sites, comprising:

a frequency defining component to define a pool of available frequencies for assignment;

an assignment component to assign an available frequency from the pool of available frequencies to each cell site of the plurality of cell sites;

a frequency component to increase the pool of available frequencies for assignment to reduce an amount of interference at at least one cell site of the plurality of cell sites; and

a frequency assignment component to assign the increased pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies.

23. A computer program product for increasing capacity of a wireless network having a plurality of cell sites, comprising:

a frequency defining module to define a pool of available frequencies for assignment;

an assignment module to assign an available frequency from the pool of available frequencies to each cell site of the plurality of cell sites;

a frequency module to increase the pool of available frequencies for assignment to reduce an amount of interference at at least one cell site of the plurality of cell sites; and

a frequency assignment module to assign the increased pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies.

24. A method for increasing capacity of a wireless network having a plurality of cell sites, comprising the steps of:

assigning an available frequency from a pool of available frequencies to each cell site of the plurality of cell sites;

determining an amount of interference at at least one cell site of the plurality of cell sites;

modifying the pool of available frequencies for assignment based on the determined amount of interference; and

assigning the modified pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies.

25. A system for increasing capacity of a wireless network having a plurality of cell sites, comprising:

an assignment component to assign an available frequency from a pool of available frequencies to each cell site of the plurality of cell sites;

a determination component to determine an amount of interference at at least one cell site of the plurality of cell sites;

a frequency component to modify the pool of available frequencies for assignment based on the determined amount of interference; and

a frequency assignment component to assign the modified pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies.

26. A computer program product for increasing capacity of a wireless network having a plurality of cell sites, comprising:

an assignment module to assign an available frequency from a pool of available frequencies to each cell site of the plurality of cell sites;

a determination module to determine an amount of interference at at least one cell site of the plurality of cell sites;

a frequency module to modify the pool of available frequencies for assignment based on the determined amount of interference; and

a frequency assignment module to assign the modified pool of available frequencies to the cell sites to limit the number of neighboring cell sites assigned the same one of the available frequencies. - -